

## REMARKS

Reconsideration of the above-identified application is respectfully requested.

The application now contains Claims 24-63.

Support for the new claims is found throughout the specification, for example, support for claims 24-33 is found in pages 3-5 and in the examples of the specification. At page 4 lines 9-16 of the specification, it is stated "the resulting enzyme treated glucan can be characterized as a branched  $\beta$ -(1,3) glucan with  $\beta$ -(1,3) linked side chains being attached by  $\beta$ -(1,6)-linkage and being essentially free of  $\beta$ -(1,6)-linked chains." The " $\beta$ -(1,6) chains is meant to include branches of more than one  $\beta$ -(1,6)-linked glucose units." The  $\beta$ -(1,6) glucanase linkage ensures that most chains with more than  $\beta$ -(1,6)-bound glucose units are cleaved.

Claim 29 states that the  $\beta$ -(1,6)-linked chains do not contain more than 4  $\beta$ -(1,6)-bound glucose units which are on the  $\beta$ -(1,6) linkage attaching  $\beta$ -(1,3)-bound side chains. Thus, two different embodiments of the branched  $\beta$ -(1,3) glucan are disclosed and described in the specification.

With reference to the composition claims, 39-43, the description of the glucans are found throughout the examples of the specifications. Various adjuvants and additional ingredients in the formulation would likely be known by one skilled in the art.

A method of increasing immunostimulation in fish or mammals is found in the examples of the specification, wherein biological effects of glucan particles and solubilized glucans are disclosed.

In reference to the method of preparing a soluble glucan, a description of the method is found on pages 4-6 of the specification and in the examples. Support is also found in these areas for a solubilized branched  $\beta$ -(1,3) glucan as described in claims 50 and 51.

Uses for the distinguished glucans as therapeutic agents are described throughout the specification wherein references are made to food supplements, feed grade glucans and a pharmaceutical product, namely vaccines for immunomodulatory effects in fish and animals.

It is therefore submitted that the new claims find support in the current specification and no new subject matter is being added to the application.

In view of the submission of the new claims, the prior art cited in the previous office action is not applicable. For example, the Shiota et al. reference

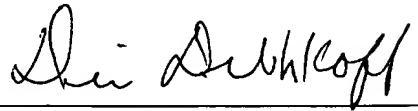
does not anticipate or render obvious the presently claimed invention. For example, the Shiota reference merely shows the cleaving of glucans by an enzyme to produce a single cell protein, it is not indicative of the presently claimed glucan and the function as an immunomodulatory agent.

Applicants request an early notice of allowance.

Respectfully submitted,

January 26, 2005

Date

A handwritten signature in cursive script, appearing to read "W. Dennis Drehkoff", written over a horizontal line.

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